In LaTeX, the best practice is to use the physics package for curl symbol as well, because the physics package contains a pre-defined curl command $\nabla \times$ that denotes the entire curl operator.

$$\nabla \times$$

$$\nabla \times \mathbf{F}$$

$$\nabla \times (\mathbf{F_1} + \mathbf{F_2})$$

$$\left(\frac{\partial}{\partial x}\hat{\imath} + \frac{\partial}{\partial y}\hat{\jmath} + \frac{\partial}{\partial z}\hat{k} \right) \times \mathbf{F}$$

$$\nabla \times \mathbf{F} = \begin{vmatrix} \hat{\imath} & \hat{\jmath} & \hat{k} \\ \frac{\partial}{\partial x} & \frac{\partial}{\partial y} & \frac{\partial}{\partial z} \\ F_x & F_y & F_z \end{vmatrix}$$

Other numerical systems have similar notations.

1   Another Example

To save some time when writing too many expressions with exponents is by defining a new command to make simpler:

$$(x + y)^2$$

And even the exponent can be changed

$$(y + y)^4$$